

## A Comparison of Past and Present Treatments of Endogenous Depression

By JØRGEN RAVN

In this investigation, the subjects were 180 female patients with pure endogenous depressions. These were divided into six different groups of 30 each. Of these groups, four were treated with nortriptyline, amitriptyline, imipramine and MAO-inhibitors respectively, and the results were compared with those obtained in the fifth group of patients who had been given electroplexy only, and finally with those obtained in the sixth group of patients who had received treatment before 1937.

Only patients with pure, manifest depression of the manic-depressive type were included. Those excluded were patients with questionable diagnoses, or whose depression turned into mania during treatment, as well as patients with paranoid or psychopathic traits, or whose clinical picture clearly indicated arteriosclerosis or oligophrenic conditions.

In all groups the treatment under review was the first kind of treatment that the patients received during the relevant period of hospitalization. Patients treated for less than three weeks, and patients who were given treatment combined with other psychopharmacological agents were excluded.

The antidepressant drugs applied were nortriptyline (Nortriptylin Lundbeck), amitriptyline (Saroten), imipramine (Tofranil), and the MAO-inhibitors iproniazide (Marsilid) (25 patients) and isocarboxide (Marplan) (5 patients). For these four groups it was also recorded on how many occasions the drug therapy was combined with E.C.T. if the former did not give a satisfactory result in the course of 3-4 weeks.

For nortriptyline, amitriptyline and imipramine the initial dosage was 75 mg. daily. This was raised in the case of nortriptyline to a maximum dosage of 150 mg. per day; for

amitriptyline and imipramine the highest dosage was 225 mg. The maintenance dosage for all three was from 50 mg. to 75 mg. daily.

The commencing dosage of iproniazid was 150 mg. daily increasing to a maximum of 300 mg. and with a maintenance dosage of 100 mg. per day. The initial dosage of isocarboxide was 20 mg. daily, rising to 60 mg. and with a maintenance dosage of 30 mg. per day.

The average duration of in-patient treatment is shown in column 2 of Table I.

The patients in the group treated only with E.C.T. all had narcocurare electroplexy as their first and only treatment for 3-4 weeks. The E.C.T. was given twice weekly. If the result was unsatisfactory the treatment was combined with other therapy, viz. chlorpromazine (Largactil), meprobamate (Restenil), or with modified insulin treatment.

The last group, consisting of patients treated before the introduction of shock treatments at the psychiatric hospital in Middelfart in 1937 had received such drugs as opium, barbiturates and bromides.

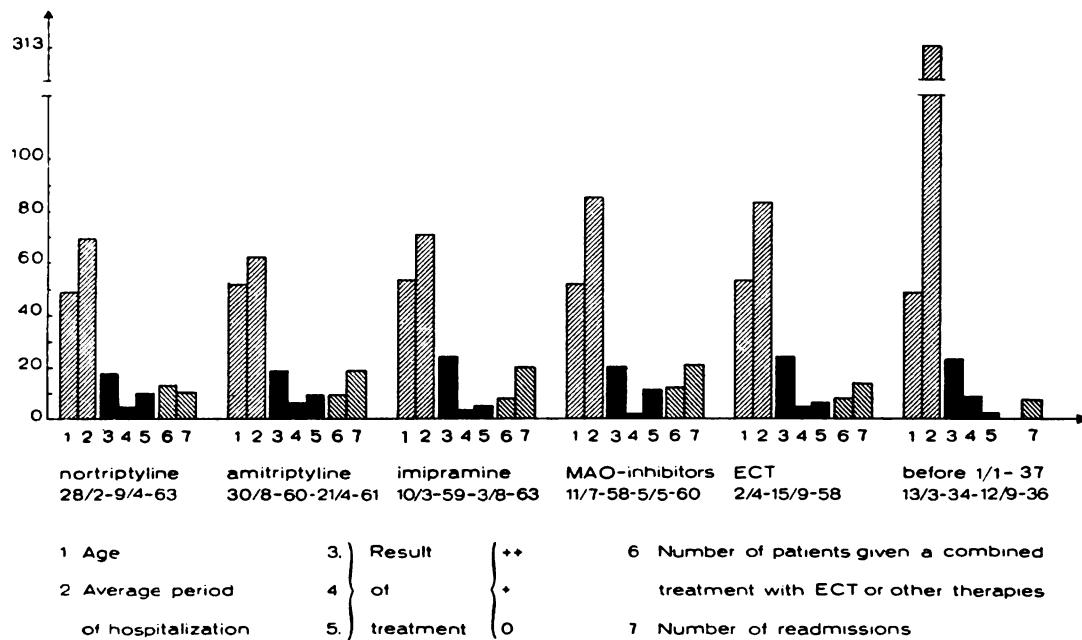
In the review, particular interest has been taken in the duration of hospitalization of patients treated with antidepressant drugs compared with those treated with electroplexy and before 1937. In addition a comparison was made between the results obtained in each group.

As will be seen in Table I the average age of the patients on admission is about the same in all groups, viz. 49.2, 51.1, 52.1, 50.6, 52.6 and 47.4 years.

When computing the average period of hospitalization, the days of admission and discharge were both included.

In the first five groups the length of hospital

TABLE I



stay was similar, viz. 68.7, 62.3, 70.4, 84.3 and 81.3 days respectively. The patients treated with MAO-inhibitors and E.C.T. stayed in hospital for the longer time, and those treated with amitriptyline for the shorter time, while the groups treated with nortriptyline and imipramine remained in hospital for about the same number of days. Thus the patients treated with E.C.T. did not have a shorter hospital stay than those treated with antidepressant drugs. The latter therapy was instituted in July 1958; the patients who were treated only with E.C.T., received this treatment before we commenced applying antidepressant drugs, i.e. in the period 2/4-19/9, 1958. During the whole time from 1953 to the present we have had a well-developed system of after-treatment, but it was not until we started treating the patients with antidepressant agents that the depressive patients began to come to our follow-up clinics. Previously, after-treatment was chiefly given to schizophrenics. This may in some measure account for the shorter duration of hospitalization in the first three groups, but it may be due also to the effect of the drugs.

In the last group, i.e. patients admitted to

hospital before the introduction of shock/therapy, the picture is quite different; here the average time of hospitalization was 313.4 days.

In Table I the centre columns indicate the results of treatment, ++ meaning satisfactory, + fairly good, and 0 no result. It will be noted that the figures are rather alike in all six groups. Where antidepressant drugs were applied we have been able to place 17, 17 and 23 patients respectively in the ++ group; in this group came also 19 patients treated with MAO-inhibitors, and 22 treated with E.C.T. In the pre-1937 group too, a satisfactory result (++) was obtained in 22 patients—but then these patients had spent an average of 313 days each in hospital.

It might seem as if the best results were obtained with imipramine and E.C.T.

In the first four groups we had to combine the therapy with E.C.T. after 3-4 weeks in 13, 8, 7, and 11 patients respectively. Here amitriptyline and imipramine seem to be best. When combining the therapy with E.C.T. four-five shocks were usually enough.

As to the patients treated with E.C.T., a combination with other therapies proved neces-

TABLE II  
*Side-effects after E.C.T.*

Rise in temperature .. ..	7 times
Tachycardia .. ..	5 times
Headache .. ..	94 times
Dizziness .. ..	11 times
Nausea .. ..	12 times
General indisposition .. ..	17 times
Muscle pain .. ..	2 times
Amnesia .. ..	21 times
Total .. ..	169 times
No side-effects .. ..	44 times

sary in 8 cases. On the average each patient in this group was given 8-9 shocks.

As could be expected, many of the patients have been re-admitted with recurrent attacks of depression. Since the treatment of the nor-triptyline group was only terminated on April 9 1964—the first patient was treated in March, 1963—it is difficult to say anything definite as to the number of re-admissions but they seem to be of the same order. Yet there are strikingly few in the pre-1937 group thus it would seem that the many re-admissions seen nowadays are due to either too low a dosage or too short an after-treatment. It may be that an attack of depression does in fact last for something like 313 days, and what we obtain with modern therapy is to produce a symptomatic remission; if after-treatment is not given for a sufficiently long time and in sufficient doses, the depressive symptoms will reappear and the natural course of the disease will be resumed.

The material at hand does not indicate that E.C.T. is superior to other therapies.

Since 1952 I have been the head of this department, and there has been no change in our diagnostic outlook. I have arrived at the diagnoses myself, and for the patients treated before 1937, I have perused all the records of patients suffering from depression, and selected only those giving a clear picture of a genuine endogenous depression.

The present material only gives some hints. The groups are small, and I have therefore refrained from a regular statistical arrangement of the material.

It is often stated that beyond the well-known amnesia, the side-effects of E.C.T. are few.

At "Statshospitalet i Middelfart", dept. K., we have investigated the frequency of side-effects in 30 female patients suffering from genuine endogenous depression, and treated with narco-curare-electroplexy.

The investigation was carried out between July 2 and November 9, 1964. Altogether 148 shocks were given to 30 patients, i.e. average 4.9 to each patient. Two shocks were given every week.

Side-effects were entered in special forms the day after E.C.T. had been given. We did not question the patients about side-effects but have recorded only what they spontaneously reported to the nurses.

Only 3 patients reported no side-effects. These had received altogether 7 shocks, i.e., one patient had been given 1 shock, and the other two patients 3.

The side-effects observed are listed in Table II.

In this interim report we have only recorded the side-effects on the day after E.C.T. had been given. From the findings it must be admitted that E.C.T. has quite a number of drawbacks. Side-effects are not solely connected with psychopharmacological drugs.

#### SUMMARY

Women patients with definite endogenous depression were split up into 6 groups each of 30 patients. The age distribution was similar in the groups. Patients in the first 3 groups were treated with thymoleptics, namely nortriptyline, amitriptyline, and imipramine: the 4th group with monoamineoxidase inhibitors—(iproniazid and isocarboxide)—while patients in the 5th group were given E.C.T. The last group consists of patients treated before 1937. (They were given opium, barbiturates and bromides.)

In the first 5 groups the average duration of in-patient treatment was from 62 to 84 days. Patients treated with amitriptyline spent least time in hospital. Patients treated with E.C.T. spent no less time than those treated with anti-depressives. The patients treated before 1937 had an average stay in hospital of 313 days.

Results of the treatments were fairly similar. The best results were achieved with imipramine and E.C.T.

The number of re-admissions indicates that when antidepressives are given follow-up treatment should be continued for a lengthy period and with an adequate maintenance dosage.

In 30 patients treated with E.C.T. alone only 3 showed no side-effects. E.C.T. produces side-effects no less than do the anti-depressive drugs.

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